REMARKS/ARGUMENTS

Claims 7-26 are pending. These claims track and find support in the original claims and specification as follows: Claim 7 (Claims 1-2, page 16, lines 19-21), Claim 8 (page 7, lines 15-16), Claim 9 (page 9, lines 21-23), Claim 10-14 (Claim 2, page 10, lines 5-13), Claim 15 (page 20, lines 8, 12 and 20), Claims 16-17 (Claim 5), Claim 18 (Claim 6), Claim 21 (pages 31-32), Claim 22 (Claim 4), Claim 23 (Claim 6), Claim 24 (Claim 3), Claim 25 (page 19, lines 1-2) and Claim 26 (page 19, lines 1-2). Accordingly, the Applicants do not believe that any new matter has been introduced.

The Applicants thank Examiner Keys for the courteous and helpful discussion of February 15, 2005. It was suggested that the Applicants incorporate formula (a) from Claim 2 into the independent claim to address the prior art rejections based on Chauvin, U.S. Patent No. 5,525,228 and Jung, U.S. Patent No.3,775,469, as these patents are directed to diolefins or conjugated dienes falling outside of formula (a). To address Arend, U. S. Patent No. 4,017,564, it was suggested that the independent claims be directed to formula (a) or that the oxygen nucleophile be further defined. Amendments tracking these suggestions are now presented. Accordingly, favorable consideration and allowance of this application is now respectfully requested.

Aspects of the Invention

One aspect of the present invention is a process for obtaining an allyl compound having a compositional formula different from that of an allyl starting material. The process involves reacting a first allyl starting material compound with an oxygen nucleophilic agent in the presence of a specific type of transition metal compound and a specific type of monodentate phosphite ligand. Conventional processes for this purpose have low reactivity and it has been difficult to react an allyl compound with an oxygen nucleophilic agent having

a low reactivity. However, by employing the specific catalyst (monodentate phosphite ligand) of the present invention a superior process with high reactivity is obtained and allyl compounds may be efficiently produced.

Rejection—35 U.S.C. §112, second paragraph

Claims 2 and 3 were rejected under 35 U.S.C. 112, second paragraph as being indefinite. These rejections are moot in view of the cancellation of these claims.

Rejections--35 U.S.C. §102

Claims 1, 3, 4 and 6 were rejected under 35 U.S.C. 102(b) as being anticipated by Jung, U.S. Patent No. 3,775,469 and Claims 1 and 3-6 were rejected under 35 U.S.C. 102(e) as being anticipated by Chauvin, U.S. Patent No. 6,525,228. These rejections are moot in view of the cancellation of these claims and would not apply to the new claims for the following reasons.

The Jung and Chauvin processes do not involve an allyl compound of formula (a). These patents disclose a method for carrying out telomerization of a conjugated diene (specifically dimerization) and the addition reaction of a nucleophilic agent in the presence of a catalyst made of a transitional metal compound (palladium) and an organic phosphate compound.

The reactive substrate (starting material) of the present invention is an allyl compound, while a reactive substrate of the cited references is a conjugated diene. In general, an allyl group is a compound having a C=C-CR_2- structure, and a CR_2 part of the allyl group is a group formed by sp3 carbon (not olefin). On the other hand, the conjugated diene of Chauvin and Jung has a C=C-C=C structure, and its reactivity is essentially different from that of the allyl compound.

Further, present invention involves a substitution reaction of the allyl compound. On the other hand, the cited references disclose reactions involving the dimerization of the conjugated diene, such as butadiene, where the nucleophilic agent subsequently reacts with a formed intermidiate. It is a form of the addition reaction. Therefore, the present invention relates to a different reaction from those of the cited references. Accordingly, the Applicants respectfully submit that this ground of rejection would not apply to the present claims.

Rejections--35 U.S.C. §103

Claims 1 and 5 were rejected under 35 U.S.C. 103(a) as being unpatentable over Jung, U.S. Patent No. 3,775,469 or Chauvin, U.S. Patent No. 6,525,228. These rejections are moot in view of the cancellation of these claims and would not apply to the new claims for the reasons discussed above in the response to the corresponding anticipation rejections. There is no suggestion in these references for a process involving an allyl compound of formula (a), nor for the particular type of process of the present invention.

Rejections--35 U.S.C. §103

Claims 1-5 were rejected under 35 U.S.C. 103(a) as being anticipated by Arend et al., U.S. Patent No. 4,017,564. These rejections are moot in view of the cancellation of these claims and would not apply to the new claims for the following reasons.

Unlike the claimed method which employs phosphite as a catalyst, Arend uses the phosphite as a substrate. The Arend process involves reacting allyl or methyallyl chloride in the presence of Ni or Co with trialkylphosphites to produce allyl phosphonic dialkyl esters.

On the other hand the process of Claim 7 involves reacting an allyl compound of formula (a) with an oxygen nucleophilic agent to produce a second allyl compound in the presence of a catalyst which contains a monodentate phosphite. Moreover, to further

distinguish the claimed method, Claim 7 specifies that the oxygen nucleophilic agent and the monodentate phosphite are not the same.

The prior art method an improved method involving the Michaelis-Arbusow reaction and discloses the reaction of an allyl compound with a trivalent phosphite. This reaction is characteristic of the trivalent phosphite and its reaction is originated from that a phosphonium compound formed intermediately is likely to change into a phosphonic acid derivative. On the other hand, the present invention provides a method for forming an allyl compound by allowing an oxygen nucleophilic agent of which reactivity is conventionally low to react with a first allyl compound. The trivalent phosphite is not a reactive substrate, but is a catalyst component. Accordingly, the Applicants respectfully request that this rejection would not apply to the present claims.

CONCLUSION

In view of the above amendments and remarks, the Applicants respectfully submit that this application is now in condition for allowance. Early notification to that effect is earnestly solicited.

Respectfully submitted,

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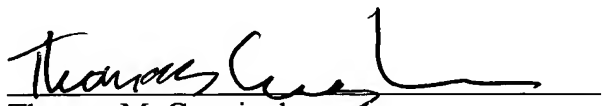

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